1993 CONTENTS

Volume 39, Number 1, February

Evaluation of the Size-Density Relationships for Pure Red Alder and Douglas-Fir Stands
K.J. Puettmann, D.W. Hann, and D.E. Hibbs 7

Predicting the Effects of Gypsy Moth on Near-View Aesthetic Preferences and Recreation Appeal
S.J. Hollenhorst, S.M. Brock, W.A. Freimund, and M.J. Twery 28

Modeling Rubber Tree Root Disease Epidemics with a Markov Spatial Process
J. Chadoeuf, J.C. Pierrat, D. Nandris, J.P. Geiger, and M. Nicole 41

Frequency Domain Tree-Ring Standardization
P.C. Van Deusen and G.A. Reams 55

Control Variate Estimators of Survivor Growth from Point Samples
F.A. Roesch, Jr. and P.C. Van Deusen 66

Douglas-Fir Nutrients and Terpenes: Potential Resistance Factors to Western Spruce Budworm Defoliation
K.M. Clancy, J.K. Itami, and D.P. Huebner 78

Retrospective Early Tests of *Pinus sylvestris* L. Seedlings Grown Under Five Nutrient Regimes
G. Eriksson, A. Jonsson, I. Dormling, L. Norell, and L.-G. Stener 95

Modeling Soil Temperature Effects on *In Situ* Decomposition Rates for Fine Roots of Loblolly Pine
G.A. Ruark 118

Genetic Variation Among Lake States Balsam Poplar Populations Is Associated with Geographic Origin
D.E. Riemenschneider and B.G. McMahon 130

Multiple-Pass Harvesting and Spatial Constraints: An Old Technique Applied to a New Problem
J.D. Nelson and D. Errico 137

Spatial Reduction Factors for Strata-Based Harvest Schedules
D.K. Daust and J.D. Nelson 152

Competitive Interference Between Selected Herbaceous and Woody Plants and *Pinus taeda* L. During Two Growing Seasons Following Planting
L.A. Morris, S.A. Moss, and W.S. Garbett 166

BOOK REVIEWS

Forestry Research: A Mandate for Change, Report of the Committee on Forestry Research, National Research Council
Reviewed by Michael Greenwood 188

Forestry Research: A Mandate for Change, Report of the Committee on Forestry Research, National Research Council
Reviewed by Robert Evenson 189

The Economic Benefits of Forestry Research, by William F. Hyde, David H. Newman, and Barry J. Seldan
Reviewed by Vernon W. Ruttan 190

Forest Regeneration Manual, edited by Mary L. Duryea and Philip M. Dougherty
Reviewed by R.C. Kellison 192

MONOGRAPH 29 (published as a separate)

Towards a Taxonomic Classification of Humus Forms
R.N. Green, R.L. Trowbridge, and K. Klinka

Volume 39, Number 2, May

Southern Pine Beetle Infestation Development: Interaction Between Pine and Hardwood Basal Areas
T.D. Schowalter and P. Turchin 201

Turbulence Near the Forest Floor of an Old-Growth Douglas-Fir Stand on a South-Facing Slope
X. Lee and T.A. Black 211

Age Trends in Genetic Parameters for Tree Height in a Nonselected Population of Loblolly Pine
C.E. Balocchi, F.E. Bridgwater, B.J. Zobel, and S. Jahromi 231

Growth and Nutrition of Hybrid Poplar in Response to Phosphorus, Zinc, and Gibberellic Acid Treatments
Y. Teng and V.R. Timmer 252

Prediction Equations for Centers of Gravity and Moments of Inertia of Loblolly Pine Stems
T.B. Lynch, T.A. Max, H.E. Burkhart, and J. Liu 260

Soil Moisture Stress Induces Transplant Shock in Stored and Unstored 2+0 Douglas-Fir Seedlings of Varying Root Volumes
D.L. Haase and R. Rose 275

Disaggregating Stand Volume Growth to Individual Trees
L. Zhang, J.A. Moore, and J.D. Newberry 295

Approximate Srivastava Estimation in Forestry
Z. Ouyang and H.T. Schreuder 309

More on Forest Regulation: An LP Perspective
H.M. Hoganson and M.E. McDill 321

Interactive Role of Elevated CO_2, Nutrient Limitations, and Water Stress in the Growth Responses of Red Spruce Seedlings
L.J. Samuelson and J.R. Seiler 348

Starch Content in Douglas-Fir: Diurnal and Seasonal Dynamics
W.L. Webb and K.J. Kilpatrick 359

Estimation with Different Stratification at Two Occasions
H.T. Schreuder, J. Li, and C.T. Scott 368

Interference Interactions in Simulated Pine-Hardwood Seeding Stands
T.S. Fredericksen, S.M. Zedaker, and J.R. Seiler 383

BOOK REVIEWS

Conifers—Morphology and Variation, by M. Vidakovic
Reviewed by John Worrall 396

Seeds of Woody Plants in North America, by J.A. Young and C.G. Young
Reviewed by Franklin T. Bonner 397

Volume 39, Number 3, August

Regulating Competition on Conifer Plantations with Prescribed Cattle Grazing
M.G. Karl and Paul S. Doescher 405

Effect of Partial Defoliation on Growth and Carbon Exchange of Two Clones of Young *Populus trichocarpa* Torr. & Gray
J.H. Bassman and J.C. Zwier 419

The Maximum Density Concept Applied to Uneven-Aged Mixed-Species Stands
H. Sterba and R.A. Monserud 432

Use of TREGRO to Stimulate the Effects of Ozone on the Growth of Red Spruce Seedlings
J.A. Laurence, R.J. Kohut, and R.G. Amundson 453

Influence of Dwarf Mistletoe and Western Spruce Budworm on Growth and Mortality of Douglas-Fir in Unmanaged Stands
G.M. Filip, J.J. Colbert, C.G. Shaw III, P.F. Hessburg, and K.P. Hosman 465

Cultural, Environmental, and Genetic Factors Interact to Affect Performance of Planted Shortleaf Pine
S.W. Hallgren, C.G. Tauer, and D.L. Weeks 478

Fitting Discrete-Time Dynamic Models Having Any Time Interval
M.E. McDill and R.L. Amateis 499

Ecotypic Specificity of Spruce Emergence-Stimulating *Pseudomonas putida*
C.P. Chanway and F.B. Holl 520

Colonization Patterns of the Mountain Pine Beetle in Thinned and Unthinned Lodgepole Pine Stands
H.K. Preisler and R.G. Mitchell 528

Photosynthetic Apparatus in Cold-Stored Conifer Seedlings Is Affected by Nursery and Storage Photoperiod
E.L. Camm and Denis P. Lavender 546

Early Successional Pathways Following Wildfire and Subsequent Silvicultural Treatment in Douglas-Fir/Hardwood Forests, NW California
J.D. Stuart, M.C. Grifantini, and L. Fox III 561

Patterns of Occurrence and New Sampling Implications for Instar IV Western Spruce Budworm (Lepidoptera:Tortricidae)
T.R. Torgersen, J.J. Colbert, and K.P. Hosman 573

Analysis of Growth Equations
B. Zeide 594

Fuel Loading, Bulk Density, and Depth of Forest Floor in Coast Redwood Stands
M.A. Finney and R.A. Martin 617

BOOK REVIEW

In Vitro Culture of Trees, by J.M. Bonga and P. Von Aderkas
Reviewed by John E. Preece 623

Volume 39, Number 4, November

Influence of Water Relations on the Limited Expansion of *Pinus Monophylla* into Adjacent *Cercocarpus Ledifolius* Communities in the Central Great Basin
R.G. Jaindl, P.S. Doescher, and L.E. Eddleman 629

The Effects of GA_3 and Organic Solvents on Acclimatization of Tissue Culture Propagated Black Cherry (*Prunus serotina* Ehrh.) Plantlets
K.L. Kavanagh, D-H. Lee, A.P. Drew, and C.A. Maynard 644

Adaptive Cluster Sampling for Forest Inventories
F.A. Roesch, Jr. 655

Modeling Multiplicative Error Variance: An Example Predicting Tree Diameter from Stump Dimensions in Baldcypress
B.R. Parresol 670

Acid Mist Affects Dehardening, Budburst, and Shoot Growth in Red Spruce
L.J. Sheppard, J.N. Cape, and I.D. Leith 680

Calibrating a Model of Stochastic Effects on Diameter Increment for Individual-Tree Simulations of Stand Dynamics
A.R. Stage and W.R. Wykoff 692

Thirty-Seven Year Performance of Loblolly Pine Seed Sources in Eastern Maryland
R.C. Schmidtling and R.C. Froelich 706

The Relationship Between Timber Production, Local Historical Events, and Community Social Change: A Quantitative Case Study
J.E. Force, G.E. Machlis, L. Zhang, and A. Kearney 722

Family Differences in Equations for Predicting Biomass and Leaf Area in Douglas-Fir (*Pseudotsuga* var. *menziesii*)
J.B. St.Clair 743

Characterizing Spatial Patterns of Trees Using Stem-Mapped Data
M. Moeur 756

A Generalized Methodology for Estimating Forest Ingrowth at Multiple Threshold Diameters
S.R. Shifley, A.R. Ek, and T.E. Burk 776

U.S. Policy and Canadian Lumber: Effects of the 1986 Memorandum of Understanding
D.N. Wear and K.J. Lee 799

A Mixed Integer Linear Programming Approach for Spatially Optimizing Wildlife and Timber in Managed Forest Ecosystems
J.G. Hof and L.A. Joyce 816

Do Fire Sizes Differ Between Southern California and Baja California?
Y.H. Chou, R.A. Minnich, and R.J. Dezzani 835

NOTE

A Continuous-Time Markov Chain for Early Selections
S. Magnussen 845

BOOK REVIEWS

Fire and Vegetation Dynamics: Studies from the North American Boreal Forest, by E.A. Johnson
Reviewed by P.N. Omi 851

Coactive Forest Management, by J.G. Hof
Reviewed by D. Wear 852

The Ecology and Silviculture of Mixed-Species Forests, by M.J. Kelty, B.C. Larson, and C.D. Oliver
Reviewed by M.G. Messina 853

1993 Contents 855

1993 Indexes 860